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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/675,002	09/30/2003	Brian K. Campbell	EMC-03-046	5206

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EMC CORPORATION  
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EXAMINER

ALPHONSE, FRITZ

ART UNIT PAPER NUMBER

2133

DATE MAILED: 03/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/675,002

Applicant(s)

CAMPBELL ET AL.

Examiner

Fritz Alphonse

Art Unit

2133

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>2</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kagan (U.S. Pat. No. 6,601,210) in view of Thiesfeld (U.S. Pub. No. 2003/0093633).

As to claim 6, Kagan (fig. 1) shows an error checking system comprising an input device (22) for receiving a data element (i.e., packet in) including parity information (col. 1, lines 45-60); a parity check device (32) for checking the parity information of the data element to determine whether the data element is valid. Kagan discloses a CRC generator (30) coupled to the parity check device (32) for generating a CRC for the data element; and an output (26) device for transmitting the data element with the parity information and CRC to a downstream device (i.e., Packet Out); wherein the parity check device is operative to output a corruption signal to the CRC generator, to instruct the CRC generator to corrupt the CRC generation for that data element (col. 1, lines 62 through col. 2 line 6).

Kagan does not explicitly disclose a parity check device to determine the validity of the data element.

However, in the same field of endeavor, Thiesfeld discloses a system for data path verification including a CRC checking device for checking the validity of the data elements (see Thiesfeld [0015]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to improve upon the data path verification system, as disclosed by Thiesfeld. Doing so would provide a very high probability that data is valid, and therefore the process validates the data itself.

In addition, as to claim 6, Kagan (fig. 1) does not explicitly disclose an output device for transmitting data over a transmission link. However, the limitation is obvious and very well known in the art, as evidenced by Kagan (fig. 2), (note the transmission line between input device 52 and output device 56).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to improve upon the data transmission device, as Kagan disclosed in figure 2. Doing so would provide means for distinguishing between internal device errors and external link errors, with reduced overhead relative to approaches known in the art (col. 2, lines 14-17).

As to claims 7-9, Kagan does not disclose an error checking system comprising an alarm device for transmitting an alarm signal to the downstream device when the CRC for a particular data element has been corrupted. However, the limitations are obvious and well known in the art, as evidenced by Zusman (col.11, lines 30-47).

As to claims 10 and 14, Kagan (fig. 2) show a data transmission system (50) comprising: a data transmission device ( 52) for transmitting data elements to a downstream device; a data reception device (56) for receiving data elements from the downstream device (i.e., Packet Out; col. 4, lines 10-24), the data reception device including: an input CRC checking device (60) coupled to receive data elements from the downstream device (i.e., Packet Out); a memory device (34) coupled to the input CRC checking device (30) for storing data elements

Art Unit: 2133

received from the downstream device after the data elements have been processed by the input CRC checking device (col. 4, lines 25-48); and an output CRC checking device (60) coupled to receive the data elements from the memory device (34).

Kagan does not explicitly disclose an output CRC checking device for checking the validity of the data elements based on the CRC.

However, the limitations are clearly disclosed by Thiesfeld ([0015]). See the motivation for the same reason disclosed in claim 6 above.

As to claim 11, Kagan (fig. 2) discloses a system, wherein the at least one state of the response data elements includes a data structure of the response data elements.

As to claims 12-13 and 15, the claims have substantially the limitations of claim 10; therefore, they are analyzed as previously discussed in claim 10 above.

As to claims 16-17, Kagan (fig. 2) discloses system, wherein the memory device includes a First-In First-Out (FIFO) memory device (58); the data reception device includes a first data element processing path and a second data element processing path for processing different portions of the received data elements.

As to claim 18, Kagan (fig. 2) discloses a system, wherein the input CRC checking device includes a first CRC checking unit (30) coupled to the first data element processing path and a second CRC checking unit (60) coupled to the second data element processing path.

As to claims 19-20, the claims have substantially the limitations of claims 15-18; therefore, they are analyzed as previously discussed in claims 15-18 above.

As to claim 1, method claim 1 corresponds to apparatus claims 10 and 14; therefore, it is analyzed as previously discussed in claims 10 and 14 above.

Art Unit: 2133

As to claim 2, Kagan (fig. 2) discloses an error checking comprising transmitting the data element with the parity information and CRC to a downstream device over a transmission link (col. 4, lines 25-48).

As to claims 3-5, method claims 3-5 correspond to apparatus claims 10 and 14; therefore, they are analyzed as previously discussed in claims 10 and 14 above.

***Conclusion***

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks, Washington, D.C. 20231

**or faxed to:** (703) 872-9306 for all formal communications.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fritz Alphonse, whose telephone number is (571) 272-3813. The examiner can normally be reached on M-F, 8:30-6:00, Alt. Mondays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert De Cady, can be reached at (571) 272-3819.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-3824

Information regarding the status of an application may also be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

Application/Control Number: 10/675,002

Page 6

Art Unit: 2133

system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Fritz Alphonse

Art Unit 2133

March 3, 2006



**GUY LAMARRE**  
**PRIMARY EXAMINER**